

TEXAS DEPARTMENT OF CRIMINAL JUSTICE JOB DESCRIPTION

POSITION TITLE: ENGINEERING SPECIALIST III -
Maintenance and Construction

SALARY GROUP: B19

DEPARTMENT: Facilities Division

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CERTIFICATION: I certify that, to my knowledge, this is an accurate and complete description of the essential functions and the conditions required for this position.

APPROVED BY: Melinda Brewer DATE: 04/15/2016

POSITION #: 022517

I. JOB SUMMARY

Performs complex engineering work. Work involves organizing program activities, studies, and projects; collecting and validating engineering and environmental data; performing planning and design functions; reviewing construction or fabrication work; and conducting inspections and materials research and testing. Works under general supervision with moderate latitude for the use of initiative and independent judgment.

II. ESSENTIAL FUNCTIONS

- A. Conducts mechanical engineering fieldwork, material research, and testing activities; and collects and samples field data for engineering and environmental projects and analyzes and validates data.
- B. Prepares specifications and draws plans using computer-aided design (CAD) equipment for engineering design applications; provides engineering consultation services; investigates complaints; and prepares correspondence and technical reports.
- C. Performs engineering and environmental assessments of the conditions for all buildings to include inspection of heating, ventilation, air conditioning, refrigeration, and ducting systems; and develops preliminary designs of a duct system by recalculating heating and cooling loads and calculating air flow.
- D. Prepares plans, specifications, estimates, and related documents for compliance with laws and standards and makes recommendations for improvements; and calculates hydraulics for water quantities, flow rates for chilled and hot water cooling and heating, and quantity estimates for labor, materials, and equipment costs.

* Performs a variety of marginal duties not listed, to be determined and assigned as needed.

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III. MINIMUM QUALIFICATIONS

A. Education, Experience, and Training

1. Graduation from an accredited senior high school or equivalent or GED.
2. Seven years full-time, wage-earning maintenance, construction, or project scope experience. Thirty semester hours from a college or university accredited by an organization recognized by the Council for Higher Education Accreditation (CHEA) or by the United States Department of Education (USDE) may be substituted for each year of experience on a year-for-year basis.
3. Computer operations experience preferred.
4. Computer-aided drafting (CAD) experience preferred.

B. Knowledge and Skills

1. Knowledge of maintenance and construction engineering techniques and theories.
2. Knowledge of project scope techniques and procedures.
3. Knowledge of agency and departmental organizational structure, policies, procedures, rules, and regulations preferred.
4. Skill to read and interpret construction plans, working plans, drawings, and specifications.
5. Skill to communicate ideas and instructions clearly and concisely.
6. Skill to coordinate with other staff, departments, officials, agencies, organizations, and the public.
7. Skill in the use of computers and related equipment in a stand-alone or local area network environment.
8. Skill to review technical data and prepare technical reports.
9. Skill to apply engineering concepts, conduct inspections, and perform design work.
10. Skill in the use of computer-aided design (CAD) equipment and in the use and maintenance of scientific instruments preferred.

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IV. ADDITIONAL REQUIREMENTS WITH OR WITHOUT REASONABLE ACCOMMODATION

- A. Ability to walk, stand, sit, kneel, push, stoop, crawl, twist, reach above the shoulder, grasp, pull, bend repeatedly, climb stairs and ladders, identify colors, hear with aid, see, write, count, read, speak, analyze, alphabetize, lift and carry under 15 lbs., perceive depth, operate a motor vehicle, and operate motor equipment.
- B. Conditions include working inside and outside, working around machines with moving parts and moving objects, working around moving objects or vehicles, radiant and electrical energy, working closely with others, working alone, working protracted or irregular hours, working on ladders or scaffolding, and traveling by car, van, bus, and airplane.
- C. Equipment (machines, tools, devices) used in performing only the essential functions include computer and related equipment, typewriter, calculator, copier, fax machine, telephone, portable electrical and electronic test equipment, CAD equipment and automobile.